

Space Weather Highlights
24 August - 30 August 2015

SWPC PRF 2087
31 August 2015

Solar activity ranged from low to high levels. Low levels were observed on 25-26 and 29 Aug, moderate (R1-minor) levels on 27-28 and 30 Aug while high (R2-moderate) levels occurred on 24 Aug. The vast majority of activity was observed from Region 2403 (S15, L=193, class/area Fkc/1190 on 25 Aug). In total, this region produced a total of 58 C-class and six M-class flares. Region 2405 (S19, L=089, class/area Cro/020 on 29 Aug) produced a total of four weak C-class flares.

The period began at high levels as Region 2403 produced an impulsive M5/1b flare at 24/0733 UTC. Later on the 24th, the region produced an M1 flare at 24/1746 UTC. On 27-28 Aug, Region 2403 produced a total of three M-class flares; an M2/1n at 27/0544 UTC, an M2/1f at 28/1316 UTC and an M2/1n at 28/1903 UTC. The period ended when Region 2403 produced a long duration M1 flare at 30/0330 UTC. During the period, no Earth-directed coronal mass ejections (CMEs) were detected.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels on 24-25 and 29 Aug and moderate levels on 26-28 and 30 Aug. The peak flux observed during the summary period was 1,840 pfu at 25/1700 UTC.

Geomagnetic field activity ranged from quiet to major storm levels. Quiet to unsettled levels were observed on 24-25 Aug due to waning effects from a positive polarity coronal hole high speed stream (CH HSS). Solar wind parameters reflected a nominal wind environment with speeds decreasing from about 500 km/s to near 350 km/s by late on 25 Aug. Early on 26 Aug, geomagnetic field conditions increased to unsettled to minor storm (G1-minor) levels due to transient effects from the 22 Aug CME. Geomagnetic activity further increased on 27 Aug to active to major storm (G2-moderate) levels and persisted at these levels through 28 Aug. During this time frame, wind speeds were unimpressive averaging about 350 km/s but the total interplanetary magnetic field (Bt) peaked at 14 nT coupled with steady southward Bz to -12 nT.

Activity levels remained elevated on 29 Aug at quiet to minor storm levels due to effects from a co-rotating interaction region in advance of an equatorial, negative polarity CH HSS. Wind speeds approached 510 km/s with peak Bt values of 17 nT and peak southward Bz briefly reached -15 nT. 30 Aug saw quiet geomagnetic field conditions with solar wind parameters indicating a return to more nominal levels.

Space Weather Outlook
31 August - 26 September 2015

Solar activity is expected to be at very low to low levels from 31 Aug - 10 Sep and again from 25-26 Sep. From 11-24 Sep, activity levels are expected to increase to low to moderate (R1-minor) due to the return of old Region 2403 (S15, L=193).



No proton events are expected at geosynchronous orbit barring any significant flare activity from returning region 2403 during 11-24 Sep.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels on 31 Aug - 02 Sep, 07-12 Sep, 19 Sep and 22-25 Sep. High flux levels are expected on 03-06 Sep, 13-18 Sep, 20-21 Sep and 26 Sep.

Geomagnetic field activity is expected to be at minor storm (G1-minor) levels on 01-02 Sep and 19 Sep due to positive polarity CH HSS effects. Unsettled to active levels are expected on 03-04 Sep, 12-16 Sep, 18 Sep, 20 Sep and 24-25 Sep due to positive polarity CH HSS effects. Mostly quiet levels are expected for the remainder of the outlook period.



Daily Solar Data

Date	Radio Flux 10.7cm	Sun spot No.	Sunspot Area (10^{-6} hemi.)	X-ray Background Flux	Flares							
					X-ray			Optical				
C	M	X	S	1	2	3	4					
24 August	128	71	950	B6.2	17	2	0	18	2	0	0	0
25 August	121	61	1190	B4.9	12	0	0	22	0	0	0	0
26 August	126	45	1100	B6.5	7	0	0	11	0	1	0	0
27 August	110	46	900	B4.8	6	1	0	9	1	0	0	0
28 August	109	52	850	B5.7	17	2	0	10	2	0	0	0
29 August	100	50	550	B4.5	4	0	0	1	0	0	0	0
30 August	92	50	130	B3.5	2	1	0	1	0	0	0	0

Daily Particle Data

Date	Proton Fluence (protons/cm ² -day -sr)			Electron Fluence (electrons/cm ² -day -sr)		
	>1 MeV	>10 MeV	>100 MeV	>0.6 MeV	>2 MeV	>4 MeV
24 August	2.3e+05	1.1e+04	2.8e+03			5.5e+07
25 August	1.3e+05	1.1e+04	2.7e+03			4.6e+07
26 August	2.3e+05	1.1e+04	2.3e+03			8.2e+06
27 August	5.1e+05	1.0e+04	2.5e+03			5.7e+06
28 August	2.7e+05	1.1e+04	2.9e+03			3.4e+06
29 August	1.9e+05	1.2e+04	3.2e+03			1.9e+07
30 August	1.6e+05	1.2e+04	2.8e+03			6.5e+07

Daily Geomagnetic Data

Date	Middle Latitude		High Latitude		Estimated	
	A	K-indices	A	K-indices	A	Planetary K-indices
24 August	7	3-2-1-2-2-2-2-1	19	2-2-5-5-4-1-2-1	8	3-2-2-2-2-1-2-1
25 August	8	2-2-3-2-2-2-2-2	18	2-2-5-5-3-2-2-1	9	2-2-3-2-2-2-3-2
26 August	19	3-3-3-4-4-2-3-4	47	3-3-5-6-6-6-4-4	30	3-3-4-4-4-4-4-5
27 August	26	3-5-5-4-3-3-3-4	65	4-6-6-6-6-6-5-5	53	5-6-6-5-4-5-4-6
28 August	28	5-4-3-3-5-3-4-4	57	5-4-5-5-5-6-7-3	43	6-4-4-3-5-5-6-4
29 August	13	4-2-2-4-3-2-2-2	20	3-3-3-6-3-2-2-2	16	5-3-2-4-2-3-2-2
30 August	5	1-1-2-2-2-2-1-1	4	2-2-1-1-1-1-1-1	5	2-1-2-1-1-1-1-1



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
24 Aug 0735	ALERT: X-ray Flux exceeded M5	24/0733
24 Aug 0837	SUMMARY: X-ray Event exceeded M5	24/0726 - 0735
24 Aug 1425	ALERT: Electron 2MeV Integral Flux \geq 1000pfu	24/1410
25 Aug 1413	CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu	24/1410
26 Aug 0509	WARNING: Geomagnetic K = 4	26/0510 - 1400
26 Aug 0849	ALERT: Geomagnetic K = 4	26/0841
26 Aug 1033	WARNING: Geomagnetic K = 5	26/1033 - 1330
26 Aug 1319	EXTENDED WARNING: Geomagnetic K = 4	26/0510 - 2200
26 Aug 1319	EXTENDED WARNING: Geomagnetic K = 5	26/1033 - 1900
26 Aug 1814	EXTENDED WARNING: Geomagnetic K = 5	26/1033 - 27/0400
26 Aug 1814	EXTENDED WARNING: Geomagnetic K = 4	26/0510 - 27/0700
26 Aug 1814	WATCH: Geomagnetic Storm Category G1 predicted	
26 Aug 2315	ALERT: Geomagnetic K = 5	26/2315
27 Aug 0306	ALERT: Geomagnetic K = 5	27/0256
27 Aug 0315	WARNING: Geomagnetic K = 6	27/0315 - 0700
27 Aug 0315	EXTENDED WARNING: Geomagnetic K = 4	26/0510 - 27/1400
27 Aug 0315	EXTENDED WARNING: Geomagnetic K = 5	26/1033 - 27/1300
27 Aug 0326	ALERT: Geomagnetic K = 5	27/0318
27 Aug 0340	ALERT: Geomagnetic K = 6	27/0339
27 Aug 0659	EXTENDED WARNING: Geomagnetic K = 6	27/0315 - 1000
27 Aug 0716	ALERT: Geomagnetic K = 5	27/0708
27 Aug 0903	ALERT: Geomagnetic K = 6	27/0859
27 Aug 1030	ALERT: Type IV Radio Emission	27/0858
27 Aug 1156	ALERT: Geomagnetic K = 5	27/1148
27 Aug 1224	ALERT: Type IV Radio Emission	27/1133
27 Aug 1252	EXTENDED WARNING: Geomagnetic K = 4	26/0510 - 28/0300
27 Aug 1253	EXTENDED WARNING: Geomagnetic K = 5	26/1033 - 27/1800
27 Aug 1633	ALERT: Geomagnetic K = 5	27/1632



Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
27 Aug 1756	EXTENDED WARNING: Geomagnetic K = 5	26/1033 - 28/0000
27 Aug 1904	WATCH: Geomagnetic Storm Category G1 predicted	
27 Aug 2242	ALERT: Geomagnetic K = 5	27/2241
27 Aug 2339	EXTENDED WARNING: Geomagnetic K = 5	26/1033 - 28/1300
27 Aug 2339	EXTENDED WARNING: Geomagnetic K = 4	26/0510 - 28/1300
27 Aug 2348	WARNING: Geomagnetic K = 6	27/2345 - 28/1700
27 Aug 2351	ALERT: Geomagnetic K = 6	27/2350
28 Aug 0009	WARNING: Geomagnetic K>= 7	28/0008 - 0700
28 Aug 0035	ALERT: Geomagnetic K = 5	28/0034
28 Aug 0306	ALERT: Geomagnetic K = 6	28/0259
28 Aug 0726	ALERT: Type II Radio Emission	28/0630
28 Aug 1210	CANCELLATION: Geomagnetic K = 6	
28 Aug 1220	EXTENDED WARNING: Geomagnetic K = 5	26/1033 - 28/2000
28 Aug 1220	EXTENDED WARNING: Geomagnetic K = 4	26/0510 - 29/0200
28 Aug 1451	ALERT: Geomagnetic K = 5	28/1451
28 Aug 1708	WARNING: Geomagnetic K = 6	28/1710 - 2000
28 Aug 1742	ALERT: Geomagnetic K = 5	28/1741
28 Aug 1916	ALERT: Geomagnetic K = 5	28/1915
28 Aug 1955	WATCH: Geomagnetic Storm Category G1 predicted	
28 Aug 1955	EXTENDED WARNING: Geomagnetic K = 6	28/1710 - 29/0000
28 Aug 1955	EXTENDED WARNING: Geomagnetic K = 5	26/1033 - 29/0300
28 Aug 1955	EXTENDED WARNING: Geomagnetic K = 4	26/0510 - 29/1800
28 Aug 2101	ALERT: Geomagnetic K = 6	28/2059
29 Aug 0255	EXTENDED WARNING: Geomagnetic K = 5	26/1033 - 29/1300
29 Aug 0304	ALERT: Geomagnetic K = 5	29/0259
29 Aug 2026	CANCELLATION: Geomagnetic Storm Category G1 predicted	
29 Aug 2158	WATCH: Geomagnetic Storm Category G1 predicted	
30 Aug 1317	ALERT: Electron 2MeV Integral Flux >= 1000pfu	30/1245

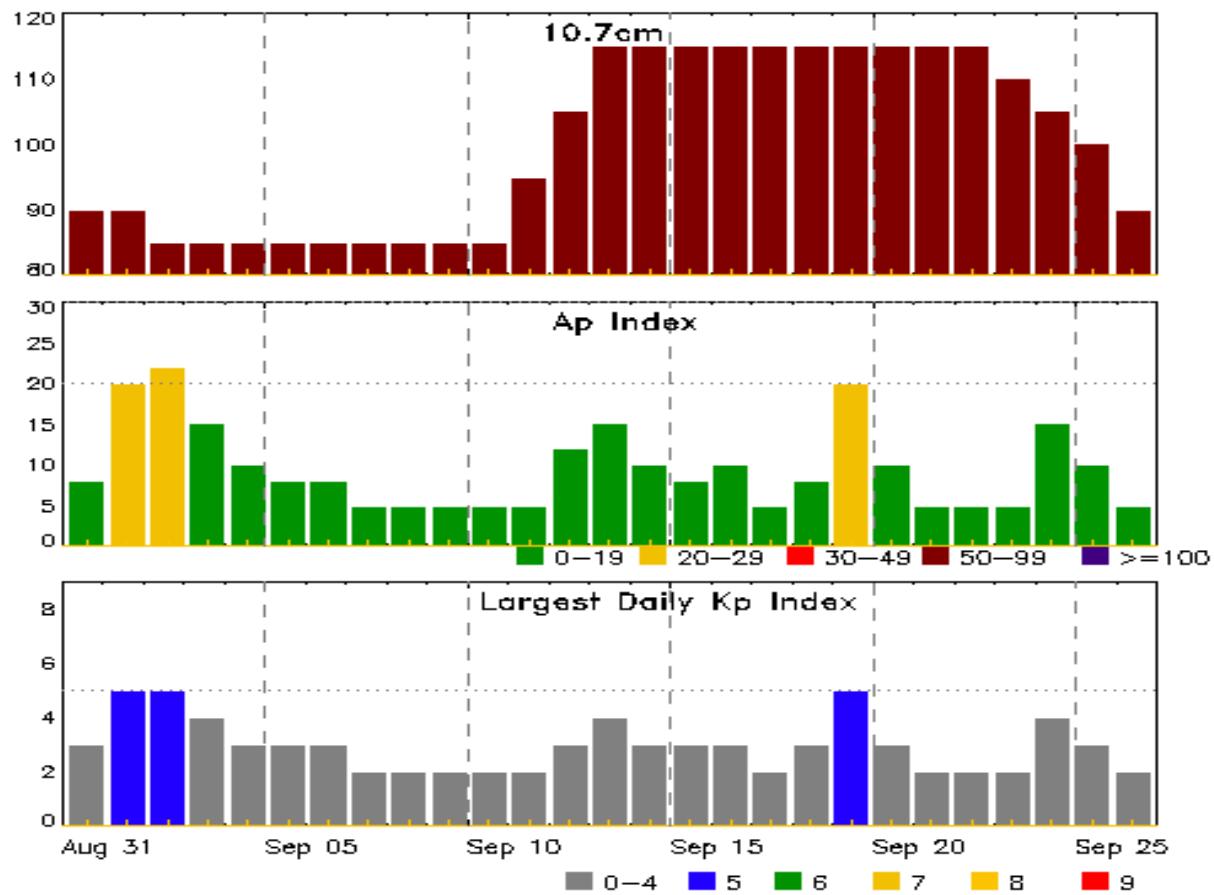


Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
30 Aug 1958	WATCH: Geomagnetic Storm Category G1 predicted	



Twenty-seven Day Outlook



Date	Radio Flux	Planetary	Largest	Date	Radio Flux	Planetary	Largest
	10.7cm	A Index	Kp Index		10.7cm	A Index	Kp Index
31 Aug	90	8	3	14 Sep	115	10	3
01 Sep	90	20	5	15	115	8	3
02	85	22	5	16	115	10	3
03	85	15	4	17	115	5	2
04	85	10	3	18	115	8	3
05	85	8	3	19	115	20	5
06	85	8	3	20	115	10	3
07	85	5	2	21	115	5	2
08	85	5	2	22	115	5	2
09	85	5	2	23	110	5	2
10	85	5	2	24	105	15	4
11	95	5	2	25	100	10	3
12	105	12	3	26	90	5	2
13	115	15	4				



Energetic Events

Date	Time			X-ray		Optical Information			Peak		Sweep Freq	
	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location Lat	CMD #	Radio Flux 245	2695	II	IV
24 Aug	0726	0733	0735	M5.6	0.011	1B	S15W04	2403	6900	100		
24 Aug	1740	1746	1749	M1.0	0.003				2403			
27 Aug	0448	0544	0603	M2.9	0.042	1N	S14W45	2403				
28 Aug	1304	1316	1323	M2.2	0.016	1F	S14W65	2403				
28 Aug	1856	1903	1906	M2.1	0.005	1N	S13W70	2403				
30 Aug	0201	0330	0423	M1.4	0.071				2403			

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat	Rgn #
24 Aug	0319	0321	0323		SF	S16W01	2403
24 Aug	0510	0512	0513		SF	S14E01	2403
24 Aug	0547	0548	0554		SF	S15W07	2403
24 Aug	0611	0615	0624	C3.2	SF	S16W02	2403
24 Aug	0635	0640	0646	C1.3	SF	S14W05	2403
24 Aug	0708	0712	0715	C6.7	1N	S15W04	2403
24 Aug	0726	0733	0735	M5.6	1B	S15W04	2403
24 Aug	0805	0808	0811	C2.8	SF	S14W08	2403
24 Aug	0818	0819	0821		SF	S17W04	2403
24 Aug	0952	0958	1001	C1.5	SF	S15W04	2403
24 Aug	1012	1019	1025	C1.6	SF	S15W05	2403
24 Aug	1033	1037	1039	C1.1	SF	S14W10	2403
24 Aug	1130	1136	1140		SF	S14W09	2403
24 Aug	1159	1206	1209	C2.5	SN	S14W07	2403
24 Aug	1321	1325	1330	C1.6	SF	S15W07	2403
24 Aug	1347	1356	1359	C2.1	SF	S15W08	2403
24 Aug	1425	1425	1428		SF	S14W11	2403
24 Aug	1503	1512	1527	C5.8	SN	S15W09	2403
24 Aug	1716	1722	1726	C1.3			2403
24 Aug	1740	1746	1749	M1.0			2403
24 Aug	1918	1922	1925	C1.3			2403
24 Aug	B1945	1953	2051	C1.2	SF	S14W01	2403
24 Aug	2206	2211	2215	C1.4	SF	S14W11	2403
24 Aug	2240	2245	2248	C3.0			
24 Aug	2306	2309	2311	C1.1			



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
25 Aug	0140	0146	0154	B7.6			2403
25 Aug	0144	0146	0148		SF	S14W19	2403
25 Aug	0200	0203	0206	B9.2	SF	S16W20	2403
25 Aug	0212	0218	0220	B8.2	SF	S16W20	2403
25 Aug	0235	0242	0247	C3.6	SF	S16W09	2403
25 Aug	0326	0330	0332	B8.7			2403
25 Aug	0414	0420	0424	C1.1	SF	S15W21	2403
25 Aug	0546	0550	0552	B8.5	SF	S15W21	2403
25 Aug	0618	0631	0637	C4.3	SF	S15W20	2403
25 Aug	0728	0728	0730		SF	S15W20	2403
25 Aug	0755	0802	0824	C2.3	SN	S17W14	2403
25 Aug	0944	0947	0950	C1.7	SF	S17W15	2403
25 Aug	1155	1159	1203	C2.3	SF	S18W17	2403
25 Aug	1233	1238	1244	C1.3	SF	S15W25	2403
25 Aug	1356	1402	1405	B9.5	SF	S18W19	2403
25 Aug	1448	1453	1458	C1.1	SF	S15W27	2403
25 Aug	1537	1540	1543	B9.7	SF	S16W18	2403
25 Aug	1632	1632	1649		SF	S16W21	2403
25 Aug	1714	1717	1722	C1.0			
25 Aug	1801	1805	1808	C1.3	SF	S11W26	2403
25 Aug	1811	1822	1838		SF	S12W28	2403
25 Aug	1923	1927	1931	C2.2	SF	S14W28	2403
25 Aug	1947	1950	1953	B8.6	SF	S16W23	2403
25 Aug	2201	2217	2228	B9.1	SF	S15W39	2403
25 Aug	2340	2353	0004	C2.8	SF	S18W40	2403
26 Aug	0256	0301	0304	C1.5	SF	S21W27	2403
26 Aug	0606	0612	0626		SF	S15W33	2403
26 Aug	0658	U0707	A0723		SF	S16W37	2403
26 Aug	0744	U0748	A0756		SF	S15W36	2403
26 Aug	0826	0826	0831		SF	S21W30	2403
26 Aug	1043	1044	1045		SF	S16W39	2403
26 Aug	1340	1350	1840	C9.5	2N	S11W41	2403
26 Aug	1451	1507	1513	C5.0			2403
26 Aug	1500	1503	1504		SF	S17W40	2403
26 Aug	1505	1505	1518		SF	S17W40	2403
26 Aug	1523	U1542	1606		SF	S17W41	2403
26 Aug	1920	1922	1924	C1.7	SF	S14W44	2403
26 Aug	1932	1943	1950	C1.7	SF	S09W50	2403



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
26 Aug	2022	2028	2033	C1.3			2403
26 Aug	2355	0003	0012	C2.4	SF	S14W44	2403
27 Aug	0025	0027	0036		SF	S14W47	2403
27 Aug	0128	0130	0134		SF	S14W48	2403
27 Aug	0136	0138	0145	C1.2			2403
27 Aug	0233	0242	0245	C1.0	SF	S12W49	2403
27 Aug	0325	0329	0336	C1.3	SF	S14W49	2403
27 Aug	0338	0341	0344	C1.0	SF	S14W49	2403
27 Aug	0441	0502	0513	C2.5			2403
27 Aug	0448	0544	0603	M2.9	1N	S14W45	2403
27 Aug	0731	0732	0748		SF	S14W49	2403
27 Aug	1710	1734	1739	B7.1			2403
27 Aug	1812	1813	1816		SF	S17W49	2403
27 Aug	2024	2031	2034	C1.4	SF	S14W57	2403
28 Aug	0029	0037	0046	C1.2			2403
28 Aug	0242	0251	0306	C8.0	SF	S13W59	2403
28 Aug	0617	0628	0638	C4.5			2403
28 Aug	0813	0819	0831	C3.7	SF	S14W63	2403
28 Aug	0944	0947	0949	C1.0			2405
28 Aug	0952	0958	1004	C1.3			2403
28 Aug	1122	1144	1154	C5.3			2403
28 Aug	1244	1255	1300	C2.6			2403
28 Aug	1304	1316	1323	M2.2	1F	S14W65	2403
28 Aug	1535	1538	1546	C1.2	SF	S14W65	2403
28 Aug	1549	1553	1600	C1.5	SF	S14W66	2403
28 Aug	1715	1719	1721	B9.5			2403
28 Aug	1734	1738	1742	C2.0			2403
28 Aug	1836	1844	1855	C1.1	SF	S11W66	2403
28 Aug	1844	1904	1924	M2.1	1N	S13W70	2403
28 Aug	1913	1915	1921		SF	S18E40	2405
28 Aug	1930	1939	1942	C4.6	SF	S13W70	2403
28 Aug	1958	2000	2003		SF	S14W68	2403
28 Aug	2016	2017	2019		SF	S14W68	2403
28 Aug	2021	2029	2038	C2.1			2403
28 Aug	2127	2139	2144	C1.7			2405
28 Aug	2210	2213	2216	C1.2			2403
28 Aug	2339	2347	2357	C4.8	SF	S14W75	2403
29 Aug	0301	0304	0306	B9.1			2403



Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/Brtns	Location Lat CMD	Rgn #
29 Aug	0720	0732	0740	C2.3			2403
29 Aug	1401	1420	1426	C1.4	SF	S23E28	2405
29 Aug	1446	1525	1541	C2.3			2403
29 Aug	1959	2037	2057	C2.4			2403
30 Aug	0201	0330	0423	M1.4			2403
30 Aug	0923	0938	1000	C1.0			2403
30 Aug	1329	1351	1354	C1.0	SF	S23E16	2405



Region Summary

Date	Lat	CMD	Location		Sunspot Characteristics					Flares							
			Helio	Lon	Area 10^{-6}	Extent hemi.	Spot Class	Spot Count	Mag Class	X-ray			Optical				
			C	M	X	S	1	2	3	4							
Region 2401																	
13 Aug	S11E50		271		10	3	Bxo	5	B						3		
14 Aug	S12E37		271		70	6	Cai	8	B		4				4		
15 Aug	S11E22		273		30	7	Cri	8	B		1				3		
16 Aug	S11E10		271		70	8	Dai	10	B						1		
17 Aug	S10W03		270		30	8	Cro	10	B								
18 Aug	S10W17		272		40	8	Cso	10	B								
19 Aug	S10W30		272		60	9	Dai	8	B						1		
20 Aug	S11W42		271		60	5	Dao	6	B						1		
21 Aug	S11W58		273		10	1	Hrx	2	A								
22 Aug	S11W72		274		plage												
23 Aug	S11W86		275		plage												
											5	0	0	13	0	0	0

Crossed West Limb.

Absolute heliographic longitude: 270

Region 2403

18 Aug	S12E64		191		60	8	Cso	3	B						1			
19 Aug	S12E50		192		90	8	Dac	8	B						5			
20 Aug	S13E37		192		330	8	Dkc	29	BG		6			16		1		
21 Aug	S14E23		192		350	10	Dkc	43	BG		3	3		19	2	1		
22 Aug	S14E09		193		400	13	Ekc	49	BGD		12	2		8	4			
23 Aug	S15W04		193		760	15	Ekc	66	BGD		5			10	1			
24 Aug	S15W18		194		930	16	Fkc	47	BGD		15	2		18	2			
25 Aug	S15W31		193		1190	17	Fki	40	BGD		11			22				
26 Aug	S16W44		193		1100	17	Fkc	35	BGD		7			11		1		
27 Aug	S15W57		193		890	17	Fkc	25	BGD		6	1		9	1			
28 Aug	S15W69		192		840	17	Fkc	27	BGD		15	2		9	2			
29 Aug	S15W82		192		520	18	Fkc	16	BGD		3							
30 Aug	S15W89		195		80	4	Dao	2	B		1	1						
											84	11	0	128	12	3	0	0

Still on Disk.

Absolute heliographic longitude: 193



Region Summary - continued

Date	Lat	CMD	Location					Sunspot Characteristics			Flares						
			Helio	Area	Extent	Spot	Spot	Mag	C	M	X	S	1	2	3	4	
Lon	10^6 hemi.	(helio)	Class	Count	Class												

Region 2404

20 Aug	N15E25	204	20	3	Cao	3	B										
21 Aug	N14E13	202	20	3	Cro	3	B										
22 Aug	N14W01	203	20	4	Cro	3	B										
23 Aug	N14W16	205	30	4	Cro	7	B										
24 Aug	N14W31	207	20	6	Cro	4	B										
25 Aug	N14W46	208	0		Axx	1	A										
26 Aug	N14W60	209	plage									0	0	0	0	0	0
27 Aug	N14W74	210	plage														
28 Aug	N14W88	211	plage														

Crossed West Limb.

Absolute heliographic longitude: 203

Region 2405

27 Aug	S21E45	91	10	1	Axx	1	A										
28 Aug	S23E35	88	10	3	Bxo	5	B	2				1					
29 Aug	S19E21	89	20	5	Cro	3	B	1				1					
30 Aug	S20E09	87	10	5	Bxo	3	B	1				1					

Still on Disk.

Absolute heliographic longitude: 87

Region 2406

29 Aug	N03E34	76	10	1	Axx	1	A										
30 Aug	N03E22	73	10	2	Axx	2	A					0	0	0	0	0	0

Still on Disk.

Absolute heliographic longitude: 73

Region 2407

30 Aug	N15W48	144	30	3	Cro	3	B					0	0	0	0	0	0
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Still on Disk.

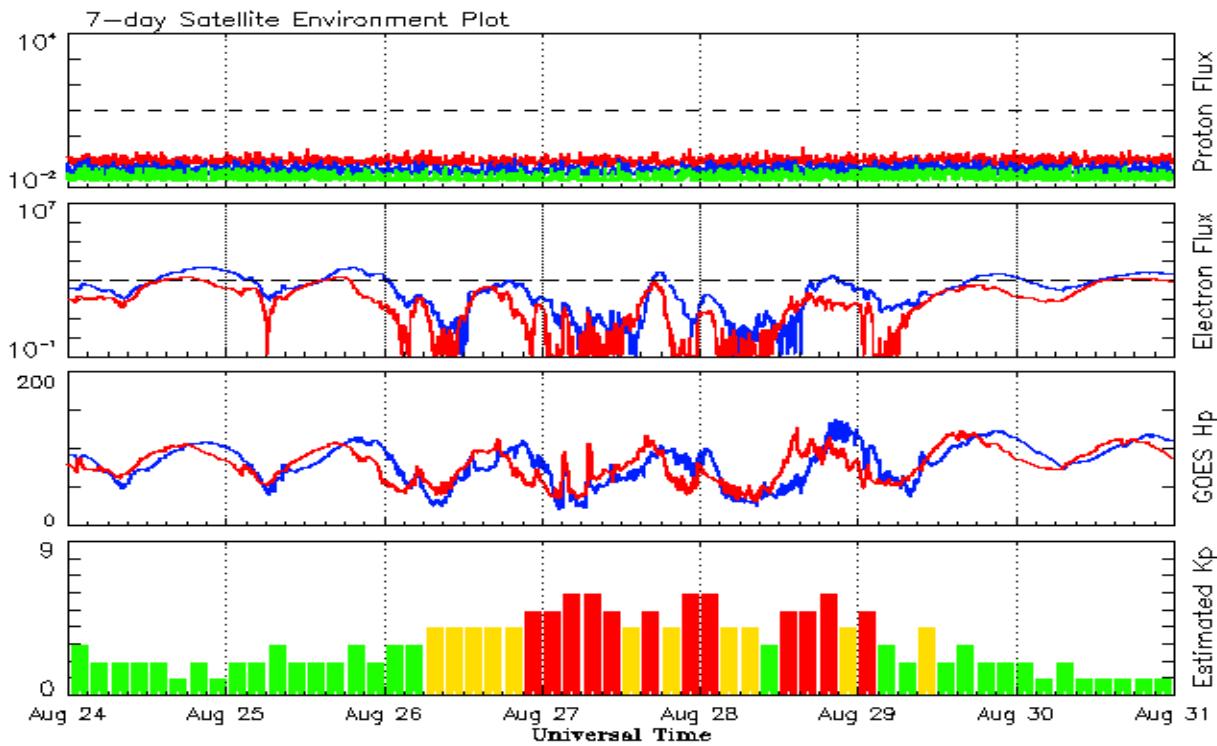
Absolute heliographic longitude: 144



Recent Solar Indices (preliminary)
Observed monthly mean values

Month	Sunspot Numbers				Radio Flux			Geomagnetic	
	Observed values		Ratio	Smooth values		Penticton	Smooth	Planetary	Smooth
	SEC	RI	RI/SEC	SEC	RI	10.7 cm	Value	Ap	Value
2013									
August	90.2	66.0	0.73	103.7	68.9	114.7	127.9	9	7.6
September	55.0	37.0	0.67	111.0	73.0	102.7	132.3	5	7.8
October	127.1	85.6	0.67	114.3	74.9	132.3	134.7	7	7.8
November	125.7	77.6	0.62	114.6	75.3	148.4	135.4	5	7.9
December	118.2	90.3	0.76	115.4	75.9	147.7	135.9	5	7.5
2014									
January	125.9	81.8	0.65	117.7	77.3	158.6	137.3	6	7.1
February	174.6	102.3	0.59	119.5	78.3	170.3	138.6	12	6.9
March	141.1	91.9	0.65	123.2	80.8	149.9	140.8	6	7.2
April	130.5	84.7	0.65	124.8	81.9	144.3	143.5	9	7.5
May	116.8	75.2	0.64	122.3	80.5	130.0	144.7	7	7.9
June	107.7	71.0	0.66	121.4	79.7	122.2	145.5	7	8.4
July	113.6	72.4	0.64	120.4	78.5	137.3	145.2	5	8.8
August	106.2	74.6	0.70	115.1	75.5	124.7	142.8	9	8.9
September	127.4	87.6	0.69	107.4	70.8	146.1	140.1	11	9.3
October	92.0	60.6	0.66	101.7	67.3	153.7	138.4	10	9.9
November	101.8	70.2	0.69	97.9	65.4	155.3	137.4	10	10.1
December	120.0	76.7	0.65	95.2	56.0	158.7	137.0	12	10.5
2015									
January	101.2	67.0	0.66	92.1	53.9	141.7	135.8	10	11.0
February	70.6	44.8	0.63			128.8		10	
March	61.7	38.4	0.62			126.0		17	
April	72.5	54.4	0.75			129.2		12	
May	83.0	58.8	0.71			120.1		9	
June	77.3	41.0	0.53			123.2		14	
July	68.4	39.8	0.58			107.0		10	

Note: Values are final except for the most recent 6 months which are considered preliminary.
 Cycle 24 started in Dec 2008 with an RI=1.7.



*Weekly Geosynchronous Satellite Environment Summary
Week Beginning 24 August 2015*

The proton flux plot contains the five-minute averaged integral proton flux ($\text{protons}/\text{cm}^2\text{-sec -sr}$) as measured by the SWPC Primary GOES satellite, near West 75, for each of three energy thresholds: greater than 10, 50, and 100 MeV.

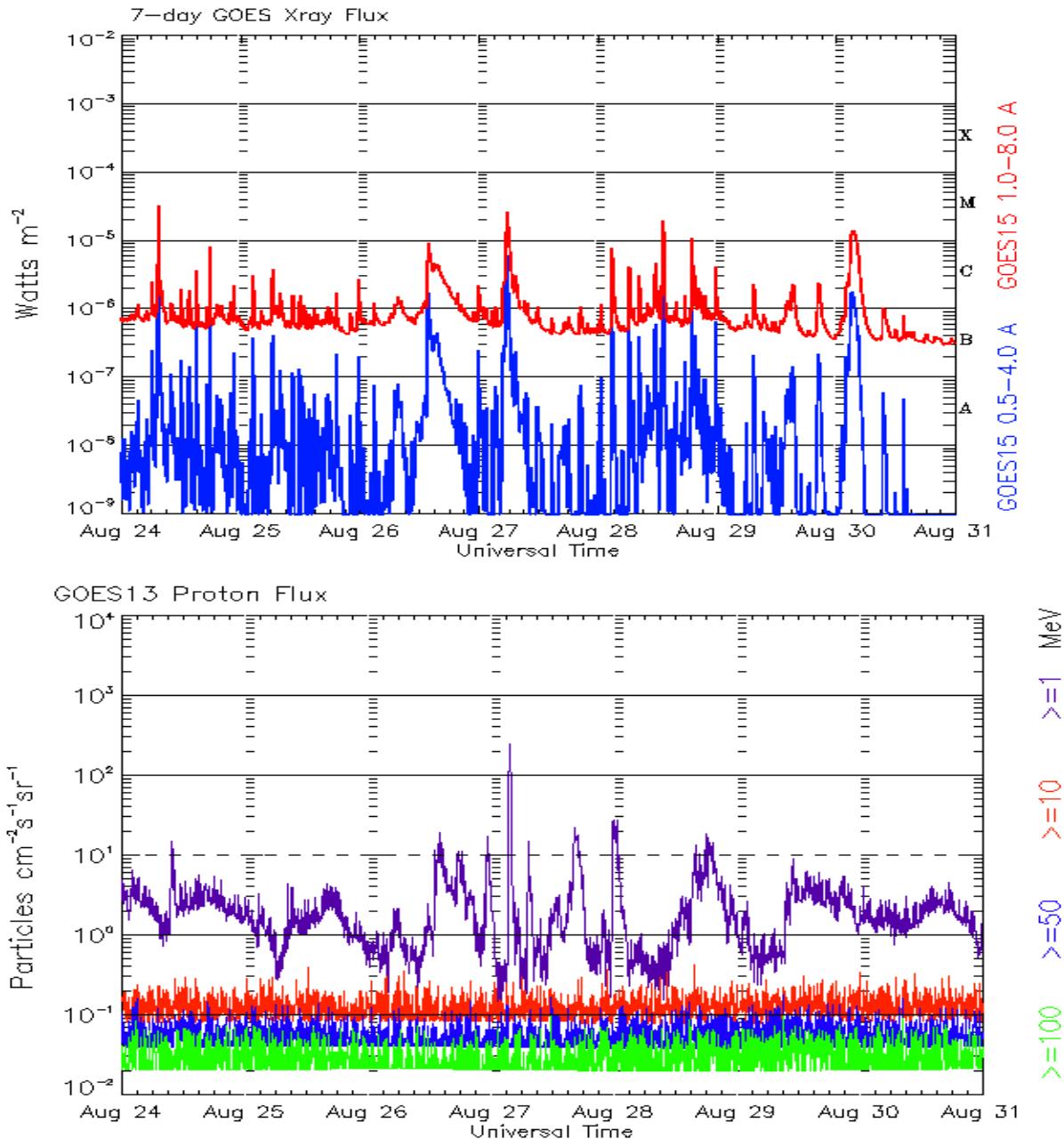
The electron flux plot contains the five-minute averaged integral electron flux ($\text{electrons}/\text{cm}^2\text{-sec -sr}$) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

The Hp plot contains the five minute averaged Hp magnetic field component in nanoteslas (nT) as by the SWPC Primary GOES satellite. The Hp component is parallel to the spin axis of the satellite, which is nearly parallel to the Earth's rotation axis.

The Estimated 3-hour Planetary Kp-index is derived at the NOAA Space Weather Prediction Center using data from the following ground-based magnetometers: Boulder, Colorado; Chambon la Foret, France; Fredericksburg, Virginia; Fresno, California; Hartland, UK; Newport, Washington; Sitka, Alaska. These data are made available thanks to the cooperative efforts between SWPC and data providers around the world, which currently includes the U.S. Geological Survey, the British Geological Survey, and the Institut de Physique du Globe de Paris.

The data included here are those now available in real time at the SWPC and are incomplete in that they do not include the full set of parameters and energy ranges known to cause satellite operating anomalies. The proton and electron fluxes and Kp are 'global' parameters that are applicable to a first order approximation over large areas. H parallel is subject to more localized phenomena and the measurements generally are applicable to within a few degrees of longitude of the measuring satellite.





*Weekly GOES Satellite X-ray and Proton Plots
Week Beginning 24 August 2015*

The x-ray plots contains five-minute averages x-ray flux (Watt/m^2) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

The proton plot contains the five-minute averaged intergral flux units (pfu = protons/ $\text{cm}^2 \cdot \text{sec} \cdot \text{sr}$) as measured by the primary SWPC GOES Proton satellite for each of the energy thresholds: >1 , >10 , >30 , and >100 MeV. The P10 event threshold is 10 pfu at greater than 10 MeV.

Preliminary Report and Forecast of Solar Geophysical Data (The Weekly)

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Notice: The 27-day Outlook, Satellite Environment, X-ray and Proton plots have been redesigned.
Comments and suggestions are welcome SWPC.Webmaster@noaa.gov

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